

1. A method of chemical mechanical polishing,
comprising:

*Linear
Fixed abv*
contacting a substrate with a generally linear
fixed-abrasive polishing sheet releasably secured to a first
5 platen, the polishing sheet having a width greater than a
diameter of the substrate;

creating relative motion between the substrate and
polishing sheet to polish the substrate;

incrementally advancing the polishing sheet in a
10 linear direction across the top surface of the first platen
after polishing at the first platen;

*circular
Fixed abv*
contacting a substrate with a generally circular
fixed-abrasive polishing pad secured to a second platen; and
rotating the second platen to create relative motion
15 between the substrate and the polishing pad to polishing the
substrate.

2. A method of chemical mechanical polishing,
comprising:

*Linear
Non Fixed*
20 contacting a substrate with a generally linear non-
fixed-abrasive polishing sheet releasably secured to a first
platen, the polishing sheet having a width greater than a
diameter of the substrate;

creating relative motion between the substrate and
25 polishing sheet to polish the substrate;

incrementally advancing the polishing sheet in a
linear direction across the top surface of the first platen
after polishing at the first platen;

*Circular
Fixed or
non-Fixed*
30 contacting a substrate with a generally circular
polishing pad secured to a second platen; and

rotating the second platen to create relative motion

between the substrate and the polishing pad to polishing the substrate.

3. The method of claim 2, wherein the circular
5 polishing pad comprises a fixed-abrasive polishing material.

4. The method of claim 2, wherein the circular
polishing pad comprises a non-fixed-abrasive polishing
material.

10 5. A method of chemical mechanical polishing,
comprising:

reversed
steps
contacting a substrate with a generally circular
polishing pad secured to a first platen;

15 rotating ^{NAB} the second platen to create relative motion
between the substrate and the polishing pad to polishing the
substrate;

20 following polishing at the first platen, contacting
a substrate with a generally linear polishing sheet
releasably secured to a second platen, the polishing sheet
having a width greater than a diameter of the substrate;

creating relative motion between the substrate and
polishing sheet to polish the substrate; and

25 incrementally advancing the polishing sheet in a
linear direction across the top surface of the second platen
after polishing at the second platen.

6. The method of claim 5, wherein the polishing pad
comprises a fixed-abrasive polishing material.

30 7. The method of claim 6, wherein the polishing sheet

comprises a fixed-abrasive polishing material.

8. The method of claim 6, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.

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9. The method of claim 5, wherein the polishing pad comprises a non-fixed-abrasive polishing material.

10. The method of claim 9, wherein the polishing sheet comprises a fixed-abrasive polishing material.

11. The method of claim 9, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.

15 12. A method of chemical mechanical polishing, comprising:

contacting a substrate with a first generally linear polishing sheet releasably secured to a first platen, the first polishing sheet having a width greater than a diameter of the substrate;

creating relative motion between the substrate and first polishing sheet to polish the substrate;

incrementally advancing the first polishing sheet in a linear direction across the top surface of the first platen after polishing at the first platen;

contacting a substrate with a second generally linear polishing sheet releasably secured to a second platen, the second polishing sheet having a width greater than a diameter of the substrate;

creating relative motion between the substrate and second polishing sheet to polish the substrate; and

incrementally advancing the second polishing sheet in a linear direction across the top surface of the second platen after polishing at the second platen;

wherein the first polishing sheet and the second polishing sheet include a fixed-abrasive polishing sheet and a non-fixed abrasive polishing sheet.

13. The method of claim 12, wherein the first polishing sheet comprises a fixed-abrasive polishing material and the second polishing sheet comprises a non-fixed abrasive polishing material.

14. The method of claim 12, wherein the first polishing sheet comprises a non-fixed-abrasive polishing material and the second polishing sheet comprises a fixed abrasive polishing material.

15. An apparatus for polishing a substrate, comprising:
a first polishing station including a first platen, a generally linear fixed-abrasive polishing sheet releasably secured to the first platen, the polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the polishing sheet in a linear direction across the top surface of the first platen;
a second polishing station including a rotatable second platen and a generally circular fixed-abrasive polishing sheet secured to the second platen;

a substrate transfer station;

a substrate carrier mechanism; and

a controller configured to cause the substrate carrier mechanism to transport the substrate from the

transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station.

16. An apparatus for polishing a substrate, comprising:

a first polishing station including a first platen, a generally linear non-fixed-abrasive polishing sheet releasably secured to the first platen, the polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the polishing sheet in a linear direction across the top surface of the first platen;

a second polishing station including a rotatable second platen and a generally circular fixed-abrasive polishing sheet secured to the second platen;

a substrate transfer station;

a substrate carrier mechanism; and

a controller configured to cause the substrate carrier mechanism to transport the substrate from the transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station.

17. The apparatus of claim 16, wherein the circular polishing pad comprises a fixed-abrasive polishing material.

18. The apparatus of claim 16, wherein the circular polishing pad comprises a non-fixed-abrasive polishing material.

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19. An apparatus for polishing a substrate, comprising:
a first polishing station including a rotatable first platen and a generally circular polishing sheet secured to the first platen;

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a second polishing station including a second platen, a generally linear non-fixed-abrasive polishing sheet releasably secured to the second platen, the polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the polishing sheet in a linear direction across the top surface of the second platen;

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a substrate transfer station;

a substrate carrier mechanism; and

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a controller configured to cause the substrate carrier mechanism to transport the substrate from the transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station.

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20. The apparatus of claim 19, wherein the polishing pad comprises a fixed-abrasive polishing material.

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21. The apparatus of claim 20, wherein the polishing sheet comprises a fixed-abrasive polishing material.

22. The apparatus of claim 20, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.

5 23. The apparatus of claim 19, wherein the polishing pad comprises a non-fixed-abrasive polishing material.

24. The apparatus of claim 23, wherein the polishing sheet comprises a fixed-abrasive polishing material.

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25. The apparatus of claim 23, wherein the polishing sheet comprises a non-fixed-abrasive polishing material.

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26. An apparatus for polishing a substrate, comprising:
a first polishing station including a first platen,
a first generally linear polishing sheet releasably secured to a platen, the first polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the first polishing sheet in a linear direction across the top surface of the first platen;

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a second polishing station including a second platen, a second generally linear polishing sheet releasably secured to the second platen, the second polishing sheet having a width greater than a diameter of the substrate, and a drive mechanism to incrementally advance the second polishing sheet in a linear direction across the top surface of the second platen;

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a substrate transfer station;

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a substrate carrier mechanism; and

a controller configured to cause the substrate

carrier mechanism to transport the substrate from the transfer station to the first polishing station, from the first polishing station to the second polishing station after the substrate has been polished at the first polishing station, and from the second polishing station to the transfer station after the substrate has been polished at the second polishing station;

wherein the first polishing sheet and the second polishing sheet include a fixed-abrasive polishing sheet and a non-fixed abrasive polishing sheet.

27. The apparatus of claim 26, wherein the first polishing sheet comprises a fixed-abrasive polishing material and the second polishing sheet comprises a non-fixed abrasive polishing material.

28. The apparatus of claim 26, wherein the first polishing sheet comprises a non-fixed-abrasive polishing material and the second polishing sheet comprises a fixed abrasive polishing material.